

REMARKS

By this Amendment, Applicants amend claims 1, 11, 21, 28, 31, 36, and 38.

Claims 39-40 are previously canceled. Claims 1-38 remain pending.

In the Office Action, the Examiner rejected claims 1-7, 9-25, and 27-38 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,529,604 to Park et al. ("Park") in view of U.S. Patent No. 6,728,739 to Kobayashi et al. ("Kobayashi"); and rejected claims 8 and 26 under 35 U.S.C. § 103(a) as being unpatentable over Park in view of Kobayashi in further view of U.S. Patent No. 6,678,653 to Tsushima et al. ("Tsushima").¹

Rejection under 35 U.S.C. § 103(a) based on Park and Kobayashi

Applicants respectfully traverse the Examiner's rejection of claims 1-7, 9-25, and 27-38 under 35 U.S.C. § 103(a) as being unpatentable over Park in view of Kobayashi, because a *prima facie* case of obviousness has not been established.

As an initial matter, Park and Kobayashi fail to teach or suggest all elements of claims 1-7, 9-25, and 27-38. Amended independent claim 1 recites a method for processing audio signals comprising a combination including, for example, "truncating the quantized data" and "for each scale factor that exceeds a threshold value, bit shifting the quantized data in the corresponding sub-band by the scale factor, wherein the threshold value is predetermined according to a desired noise tolerance level." Park fails to teach or suggest at least these features of independent claim 1. For example, the Examiner concedes that "PARK does not disclose for each scale factor that exceeds

¹ The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement or characterization in the Office Action.

a threshold value, bit shifting the quantized data in the corresponding sub-band by the scale factors.” (Office Action at 3.) The Examiner alleges that Park teaches claimed feature of “truncating the quantized data” at column 8, line 39. (Office Action at 3.) However, the cited portion instead teaches that “the bitstreams have a layered structure in which the bitstreams of lower bitrate layers are contained in those of higher bitrate layers according to bitrates.” Park, column 8, lines 38-41. There is no teaching or suggestion about “truncating the quantized data.” Kobayashi fails to cure these deficiencies of Park.

Kobayashi teaches “[a] data calculating device . . . used to improve the calculation precision when fixed-point calculation is performed by block-floating-point system.” Kobayashi, abstract. Kobayashi appears to teach a scale factor calculated for “each piece of data of the data group,” and “the scale factor of the calculated data having the largest absolute value is detected as a group scale factor.” Kobayashi, column 5, lines 4-8. Kobayashi also appears to teach that “a scaling is performed on each piece of calculated data based on the detected group scale factor,” and the “scaling is performed by shifting bits for data by the amount of the shift corresponding to the scale factor.” Kobayashi, column 5, lines 22-23, and lines 30-32. However, nowhere does Kobayashi teach or suggest that the calculated data are shifted “for each scale factor that exceeds a threshold value, . . . wherein the threshold value is predetermined according to a desired noise tolerance level,” as recited in independent claim 1. The Examiner alleges that Kobayashi teaches the claimed “threshold value,” and “the ‘threshold’ exceeded is the value of the second largest scale factor in each sub-band.” (Office Action at 3-4.) Applicants respectfully disagree with the Examiner’s

interpretation of the second largest scale factor as the claimed “threshold value.” First, Kobayashi does not explicitly disclose the Examiner’s asserted “second largest scale factor.” Moreover, it is clear that the “scale factor. . . having the largest absolute value” will always be larger than any second largest scale factor, if at all present, and thus the Examiner’s asserted “second largest scale factor” is technically not a “threshold value.” Moreover, the scale factors of Kobayashi are all calculated based on the data being processed, thus, the values of these scale factors depend on the characteristics of the calculated data. As a result, Kobayashi cannot teach or suggest that “the threshold value is predetermined according to a desired noise tolerance level,” as recited by amended claim 1.

Further, Kobayashi’s teaching of “shifting bits of data” does not constitute “for each scale factor that exceeds a threshold value, bit shifting the quantized data in the corresponding sub-band by the scale factor, wherein the threshold value is predetermined according to a desired noise tolerance level,” as recited in amended independent claim 1 (emphasis added). Rather, Kobayashi teaches that “a scaling is performed on **each piece of the calculated data** based on the detected group scale factor.” (emphasis added.) Kobayashi, column 5, lines 22-23. Therefore, Kobayashi performs scaling on all the data, instead of selectively “for each scale factor that exceeds a threshold value,” as recited in independent claim 1.

In addition, the Examiner does not allege and Kobayashi does not teach or suggest “truncating the quantized data,” as recited in claim 1. Therefore, for at least reasons set forth above, neither Park nor Kobayashi, taken alone or in any reasonable

combination, teaches or suggests all elements of independent claim 1. For at least this reason, amended independent claim 1 is allowable over Park in view of Kobayashi.

Moreover, a *prima facie* case of obviousness is not established for the additional reason that a person of ordinary skill in the art would not have combined the teachings of the two references. The Examiner alleges that the scaling applied to each piece of calculated data in Kobayashi “can be applied to the sub-bands in Park.” (Office Action at 4.) Applicants respectfully disagree. Park appears to teach several “scale factor bands,” which are interpreted by the Examiner as the claimed “sub-bands,” and Kobayashi appears to teach a scale factor calculated for “each piece of data of the data group,” and “a scaling is performed on each piece of the calculated data” (Kobayashi, column 4, lines 55-62). However, the scaling of each piece of the calculated data in Kobayashi is performed based on the same “group scale factor,” where the “group scale factor” is detected as “the scale factor of the calculated data having the largest absolute value in the calculated data.” Kobayashi, column 5, lines 14-32. Therefore, with the teaching of Kobayashi of a “group scale factor”, a person of ordinary skill in the art would not have had any reason to apply the bit-shifting (scaling) taught by Kobayashi to bit shift the data in each scale factor band of Park by the corresponding scale factor in that band. Thus, a person of ordinary skill would not have combined the teachings of Park and Kobayashi.

For at least reasons set forth above, Park and Kobayashi can not be combined in the manner proposed by the Examiner and do not establish a *prima facie* case of obviousness. Accordingly, Applicants respectfully request withdrawal of the Section 103(a) rejection of claim 1. Applicants also request withdrawal of the Section 103(a)

rejection of claims 2-7 and 9-10, at least in view of their dependence from an allowable base claim.

Moreover, amended independent claims 11, 21, 28, 31, and 36, while of different scope, include similar recitations to those recited in amended independent claim 1. Claims 11, 21, 28, 31, and 36 are therefore also allowable for at least the reasons stated above with respect to claim 1. Accordingly, Applicants respectfully request withdrawal of the Section 103(a) rejection of claims 11, 21, 28, 31, and 36.

Because claims 12-20 depend from claim 11, claims 22-25 and 27 depend from claim 21, claims 29 and 30 depend from claim 28, claims 32-35 depend from claim 31, and claims 37 and 38 depend from claim 36, either directly or indirectly, Applicants also request withdrawal of the Section 103(a) rejection of claims 12-20, 22-25, 27, 29, 30, 32-35, 37, and 38, at least in view of their dependence from an allowable base claim.

Rejection under 35 U.S.C. § 103(a) based on Park, Kobayashi and Tsushima

Applicants respectfully traverse the Examiner's rejection of claims 8 and 26 under 35 U.S.C. § 103(a) as being unpatentable over Park in view of Kobayashi in further view of Tsushima. For the reasons stated above, claims 8 and 26 should be allowable over Park in view of Kobayashi, at least in view of their dependence from allowable independent claims 1 and claim 21, respectively. Moreover, Tsushima fails to cure the deficiencies of Park and Kobayashi. Tsushima appears to disclose an "absolute scale factor (ASF) and a "modified cosine transform (MDCT)" coefficient. However, Tsushima fails to teach or suggest at least the features of "truncating the quantized data" and "for each scale factor that exceeds a threshold value, bit shifting the quantized data in the corresponding sub-band by the scale factor, wherein the

threshold value is predetermined according to a desired noise tolerance level," as recited in claim 1. Therefore, Applicants also request withdrawal of the Section 103(a) rejection of claims 8 and 26 for at least being dependent from an allowable independent claim.

Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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